

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 20-27 are currently pending. Claims 20-27 have been amended by the present amendment to correct dependencies. No new matter has been added.

In the outstanding Office Action, Claims 20, 21, 23, 26, and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,671,323 to Tahara et al. (hereinafter “the ‘323 patent”); and Claims 22, 24, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘323 patent in view of U.S. Patent No. 7,013,116 to Ashikhmin et al. (hereinafter “the ‘116 patent”).

Amended Claim 20 is directed to an encoding device, comprising: (1) means for encoding an input image signal to generate a bitstream; (2) means for generating buffer characteristics information about buffering during decoding of the bitstream, wherein the buffer characteristics information includes an input bit rate for a decoder buffer and a size of the decoder buffer for use during decoding of the bitstream, wherein the input bit rate and the size of the decoder buffer are used as criteria to determine whether the bitstream is decodable at a decoding device according to a combination between the input bit rate and the size of the decoder buffer; and (3) means for multiplexing the bitstream and the buffer characteristics information.

Regarding the rejection of Claim 20 under 35 U.S.C. § 103(a), the Office Action asserts that the ‘323 patent discloses everything in Claim 20 with the exception of “... determining whether the bitstream is decodable, using the combination of the input bit rate and the size of the decoder buffer,”<sup>1</sup> but states that it would have been obvious to one of ordinary skill in the art to determine whether the bitstream is decodable at a decoding device

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<sup>1</sup> See page 3 of the outstanding Office Action.

according to a combination between the input bit rate and the size of the decoded buffer “... because Tahara uses the characteristics, to encode the bitstream, and because that is the inverse, the produced bitstream is, of course decodable, using the same characteristics as was used in encoding the bitstream.”<sup>2</sup>

The ‘323 patent is directed to a encoding apparatus for encoding input video data, including means for extracting ancillary data that are added in the blank intervals of the input video data from the input video data; means for encoding the input video data to generate encoded streams; and means for controlling the encoding means to insert the ancillary data into a picture layer of the encoded streams. In particular, as noted in the outstanding Office Action, the ‘323 patent discloses a sequence header in Figure 11, and a picture header in Figure 23. In particular, Figure 11 in the ‘323 patent discloses that the sequence header includes the fields frame\_rate\_code, bit\_rate\_value, and vbv\_buffer\_size\_value.

However, the Office Action admits that the ‘323 patent fails to disclose means for generating buffer characteristic information about buffering during decoding of the bitstream, wherein the buffer characteristics information includes an input bit rate for a decoder buffer and a size of the decoder buffer for use during the decoding the bitstream, wherein the input bit rate and the size of the decoder buffer are used as criteria to determine whether the bitstream is decodable at a decoding device according to a combination between the input bit rate and the size of the decoder buffer, as recited in Claim 20.

Further, Applicant respectfully traverses the reasoning set forth in the outstanding Office Action as to why it would have been obvious to modify the teachings of the ‘323 patent to use the input bit rate and the size of the size of the decoder buffer as criteria to determine whether the bitstream is decodable at a coding device according to a combination between the input bit rate and the size of the decoder buffer, as required by Claim 20.

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<sup>2</sup> See page 3 of the outstanding Office Action.

First, Applicant notes that the arguments set forth on page 3 of the Office Action appear to teach away from modifying the ‘323 system to arrive at a system in which the input bit rate and the size of the decoder buffer are used as criteria to determine whether the bitstream is decodable at a decoding device according to a combination between the input bit rate and the size of the decoder buffer, as required by Claim 20. The Office Action asserts that the bitstream is “of course decodable” using the same characteristics that were used to encode the bitstream. If that is true, then why would one of ordinary skill in the art need to modify the ‘323 system to be a system that determines whether the bitstream is decodable at the decoding device? Applicant respectfully submits that one of ordinary skill in the art would not be motivated to modify the teachings of the ‘323 patent to use a combination of the input bit rate and the size of the decoder buffer as criteria to determine whether the bitstream is decodable at the decoding device, if there is an implicit assumption, as asserted by the Office Action, that the bitstream is always decodable using the same characteristics that were used to encode the bitstream, as argued on page 3 of the outstanding Office Action.

Accordingly, Applicant respectfully submits that a *prima facie* case of obviousness has not been established and that the rejection of Claim 20 should be withdrawn, since the Office Action has not provided adequate motivation for modifying the teachings of the ‘323 patent.

Further, Applicant notes that the statement on page 3 of the outstanding Office Action, that the produced bitstream is “of course decodable” using the same characteristics that were used to encode the bitstream, is simply not accurate. As discussed on page 9 of the Background section of Applicant’s specification, “[a] virtual decoder buffer model is standardized and an encoding device (encoder) performs encoding so that the virtual decoder buffer does not fail.” However, as explained on page 12 of the specification, the standardization of the JVT Codec has been in progress so that decoding is possible not only

with a fixed bit rate and a buffer size defined for each profile and level, but also it is possible that the decoder may decode the bitstream using various combinations of the bit rate and the buffer size, as shown in Figure 4. Further, the discussion of page 12 and 13 of the specification discusses the problems with such decoding, and states that “...even when decoding is possible under a predetermined condition, decoding may be impossible under another condition, since the restrictions for decoder compatibility has been relaxed. For example, when such a characteristic of (R, B) varies with time, there is a problem in that, even when decoding is possible at a predetermined time, decoding may be impossible at another time.”<sup>3</sup>

Thus, Applicant respectfully submits that the invention recited in Claim 20 addresses a problem not recognized by the ‘323 patent, i.e., the possibility that the produced bitstream is not decodable at a decoding device. Applicant respectfully submits that, without recognition of the problem, one of ordinary skill in the art would not have been motivated to modify the teachings of the ‘323 patent to have a system in which the input bit rate and the size of the decoder buffer are used as criteria to determine whether the bitstream is decodable at a decoding device according to a combination between the input bit rate and the size of the decoder buffer, as recited in Claim 20. Clearly, the statements on page 3 of the outstanding Office Action indicate that the Office has also not recognized the problem solved by the invention recited in Claim 20, and is simply engaging in hindsight reconstruction of Applicant’s invention.

For the reasons stated above, Applicant respectfully submits that a *prima facie* case of obviousness has not been established and that the rejection of Claim 20 (and all associated dependent claims) should be withdrawn.

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<sup>3</sup> Emphasis added.

Independent Claims 26 and 27 recite limitations analogous to the limitations recited in Claim 20. Accordingly, for the reasons stated above, Applicant respectfully submits that a *prima facie* case of obviousness has not been established and the rejection of Claims 26 and 27 should be withdrawn.

Regarding the rejection of dependent Claims 22, 24, and 25 under 35 U.S.C. § 103(a), Applicant respectfully submits that the ‘116 patent fails to remedy the deficiencies of the ‘323 patent, as discussed above. See the remarks set forth regarding the ‘116 patent in the Amendment filed on May 14, 2010. Accordingly, Applicant respectfully submits that a *prima facie* case of obviousness has not been established and that the rejection of Claims 22, 24, and 25 should be withdrawn.

Thus, it is respectfully submitted that independent Claims 20, 26, and 27 (and all associated dependent claims) patentably define over any proper combination of the ‘323 and ‘116 patents.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

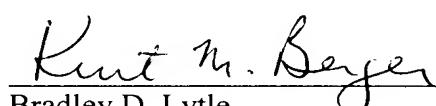
Respectfully submitted,

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